NORTH CAROLINA
Department of Transportation









The Future of Transportation

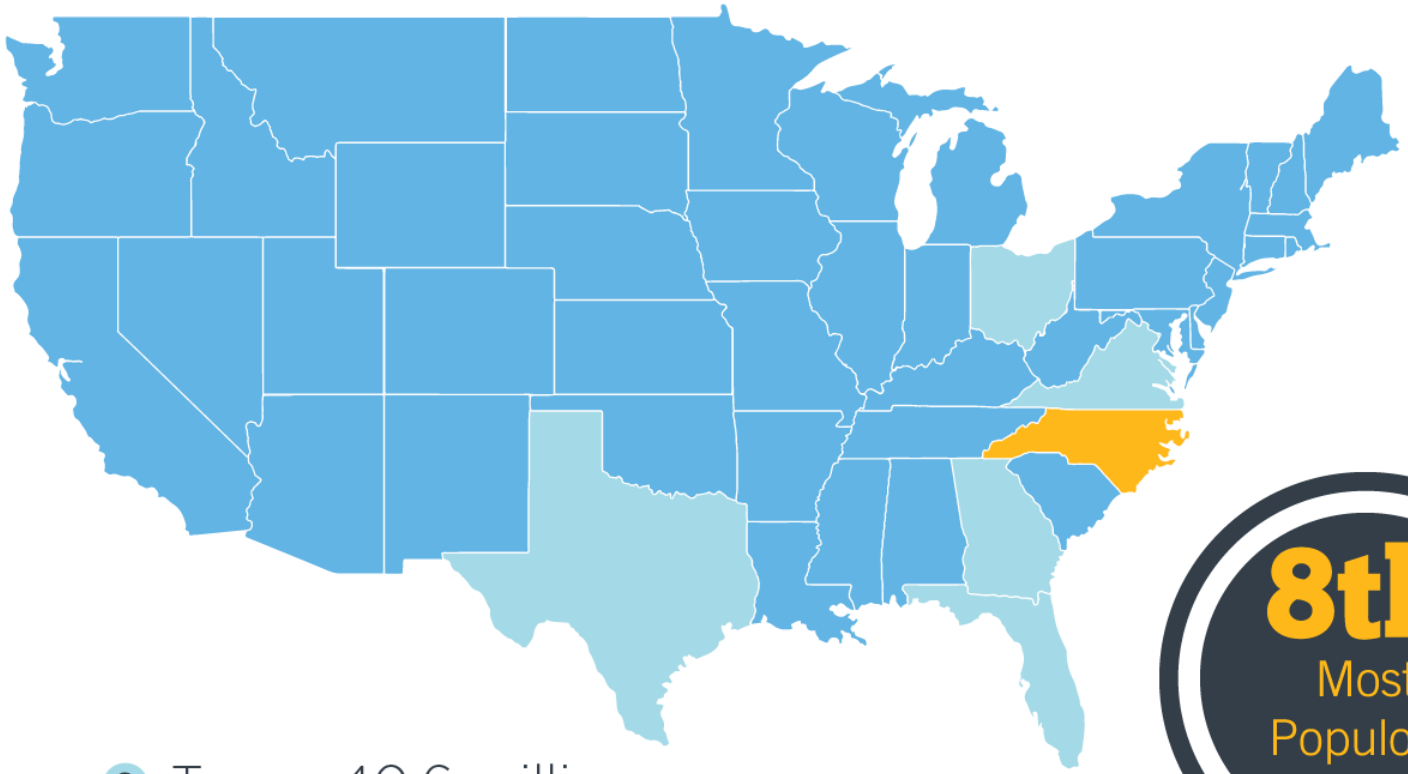
Secretary Jim Trogdon

October 2, 2017

The Future of Transportation

- Population changes will have a substantial impact on transportation
- Decline in future years' revenue from motor fuels taxes
- Changes and challenges related to new technology

Expected Population Growth by 2040



8th
Most Populous State

2040 Population Ranking

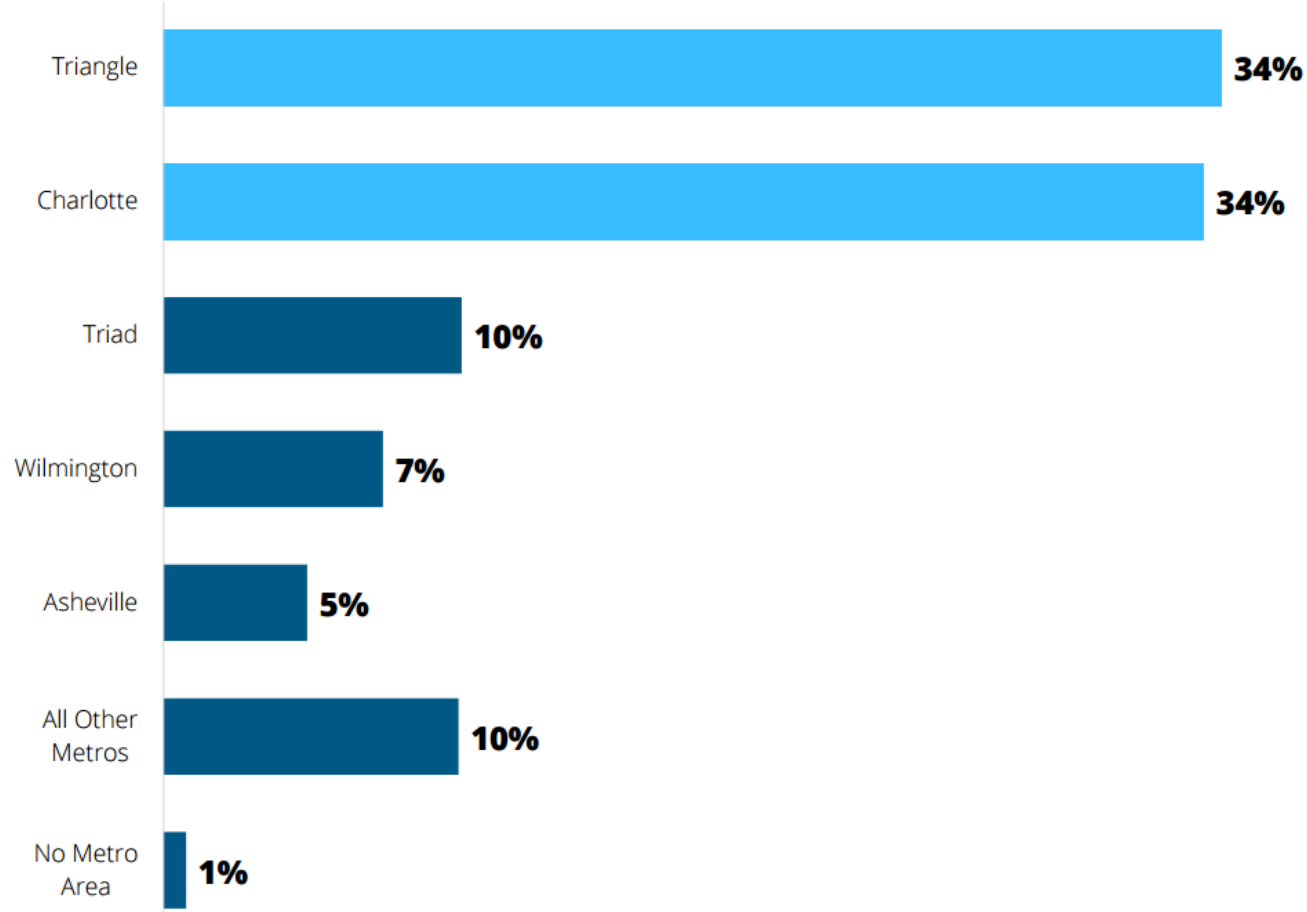
2. Texas: 40.6 million
3. Florida: 28.2 million
6. Georgia: 12.8 million
8. **North Carolina: 12.5 million**
9. Ohio: 11.7 million
10. Virginia: 10.2 million

32% increase from NC's 2010 population

NC Demographics

Two-thirds of NC growth projected to occur in Triangle or Charlotte

Projected share of 2010-2035 state population growth for select North Carolina metropolitan areas



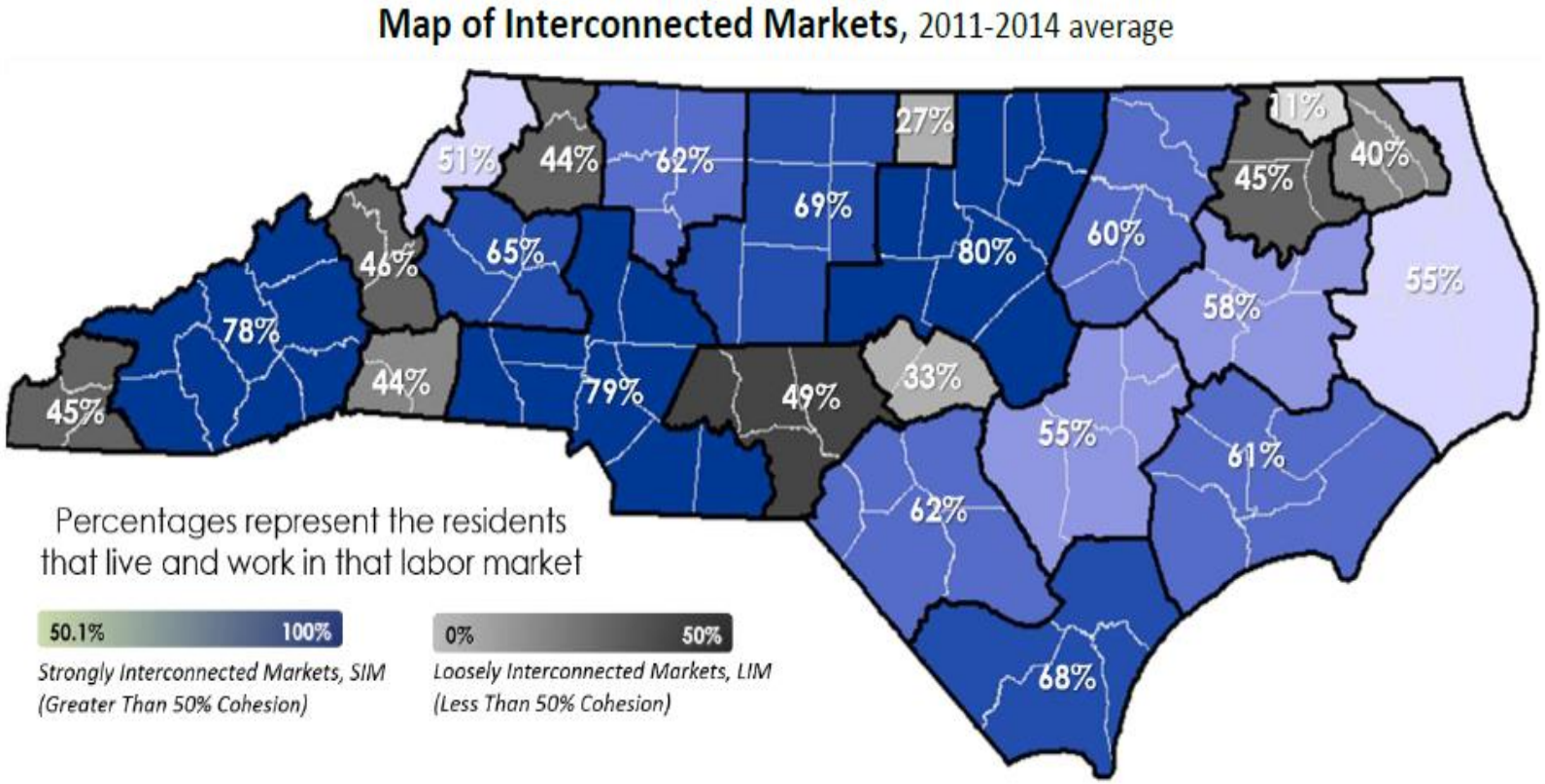
Data Source: NC OSBM

What are we doing now?

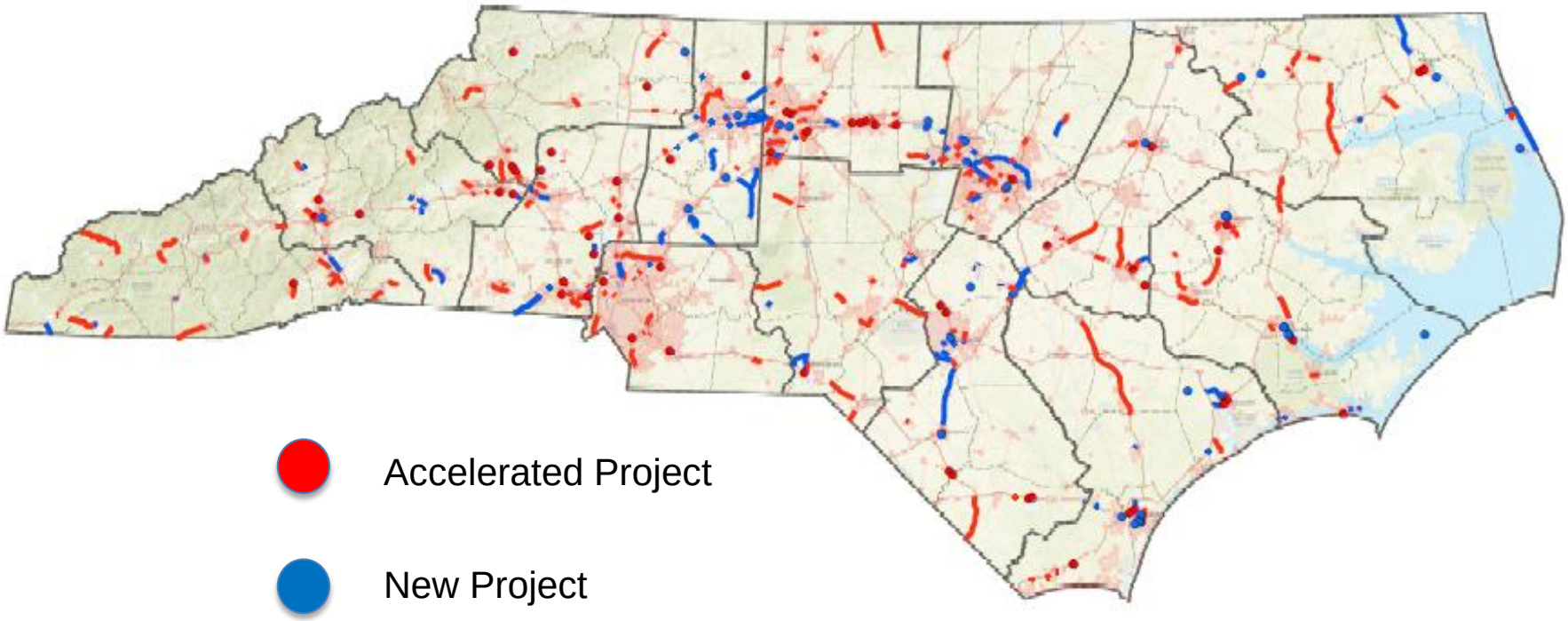
- Lack of program delivery has resulted in buildup of cash balance
  - Currently delivering 78% of TIP on schedule
  - Doing too many tasks sequentially
  - Not adjusting to revenue/cost conditions
- Plan of action
  - Reassessed and established new TIP project schedules (complete)
  - Delegated projects for Division Delivery (complete)
  - Revising project development cycles (complete)
  - Monthly monitoring of program delivery status/cash management (in progress)

What are we doing now?

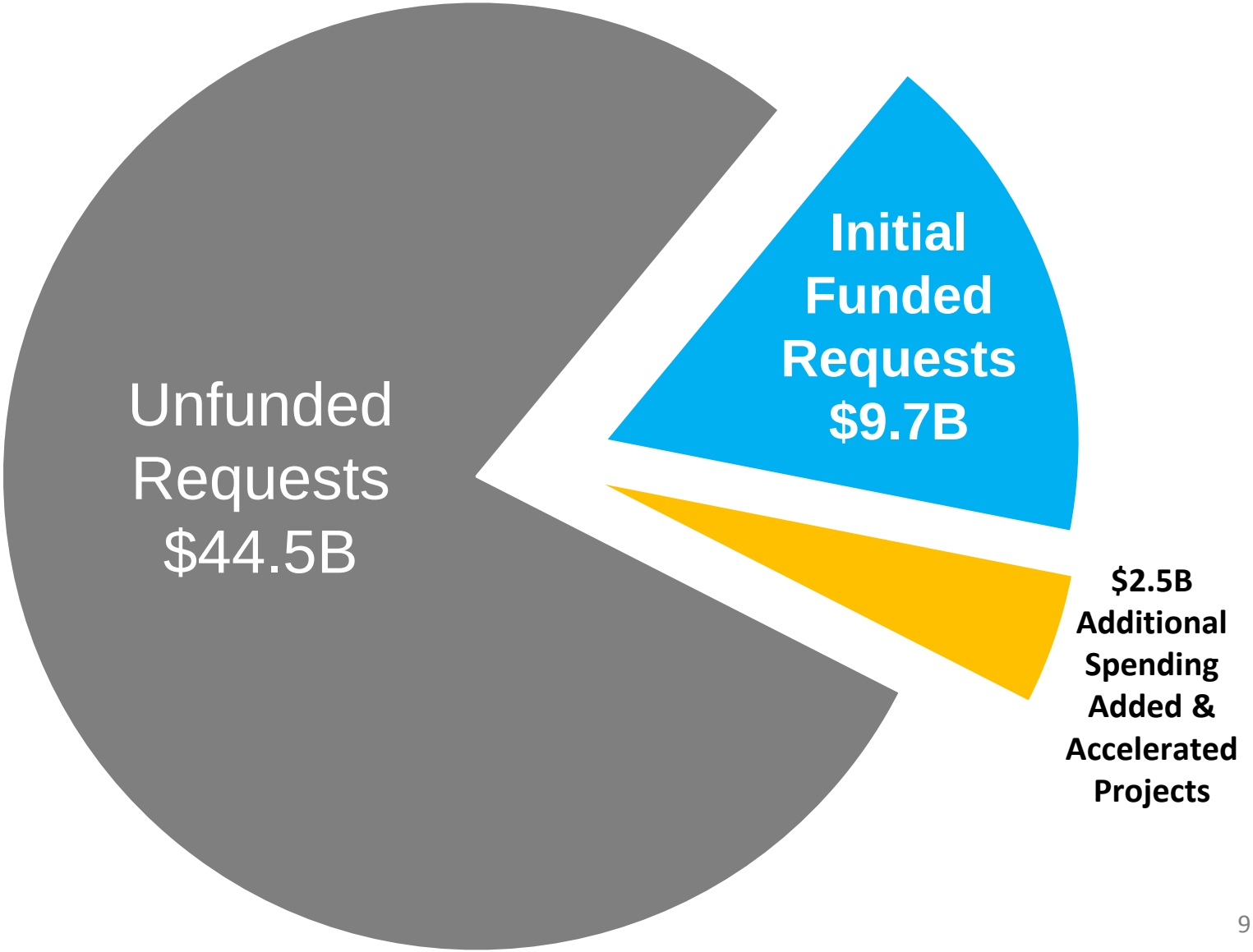
- Division Mobility & Modernization Program to address small projects < $2 M
- Division Planning Engineers to be technical support and link to rural planning organizations and municipal planning organizations
- Better access to tools for MPOs/RPOs to help in project selection and strengthen project competiveness
  - GIS
  - Travel Demand Modeling
  - Freight Analysis Modeling and Network Performance
  - Performance Metrics for Safety, Mobility, Condition
  - Transportation Economic Development Impact System
- Criteria and weights for projects selection within Division Tier


Map of Interconnected Markets, 2011-2014 average
51%
44%
62%
27%
11%
40%
45%
69%
46%
65%
80%
60%
55%
58%
78%
44%
79%
49%
33%
45%
55%
61%
62%
68%
Percentages represent the residents that live and work in that labor market
50.1%
100%
Strongly Interconnected Markets, SIM (Greater Than 50% Cohesion)
0%
50%
Loosely Interconnected Markets, LIM (Less Than 50% Cohesion)

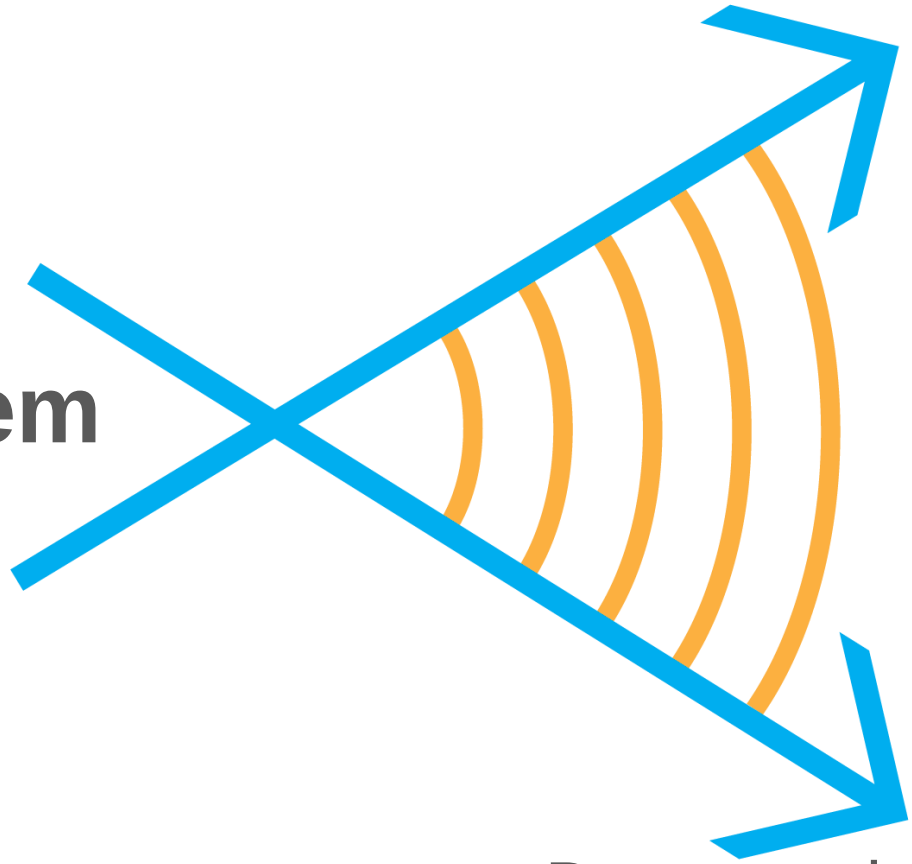
Changes Between the 2018-2027 Draft STIP & Final STIP



22% of Project Requests are Funded



Population to increase by 32 percent



Problem

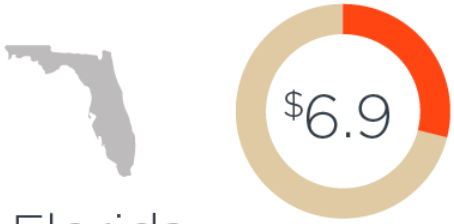
Infrastructure needs gap

Decreased mobility
Long-term funding uncertainty

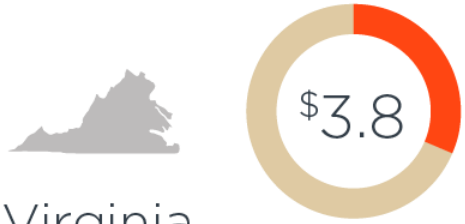
Revenue ($B) Among Peer States

Texas

North Carolina

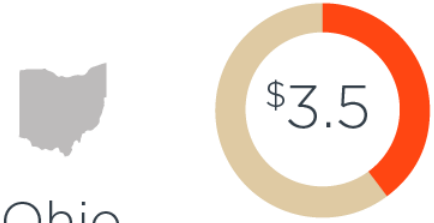


Florida



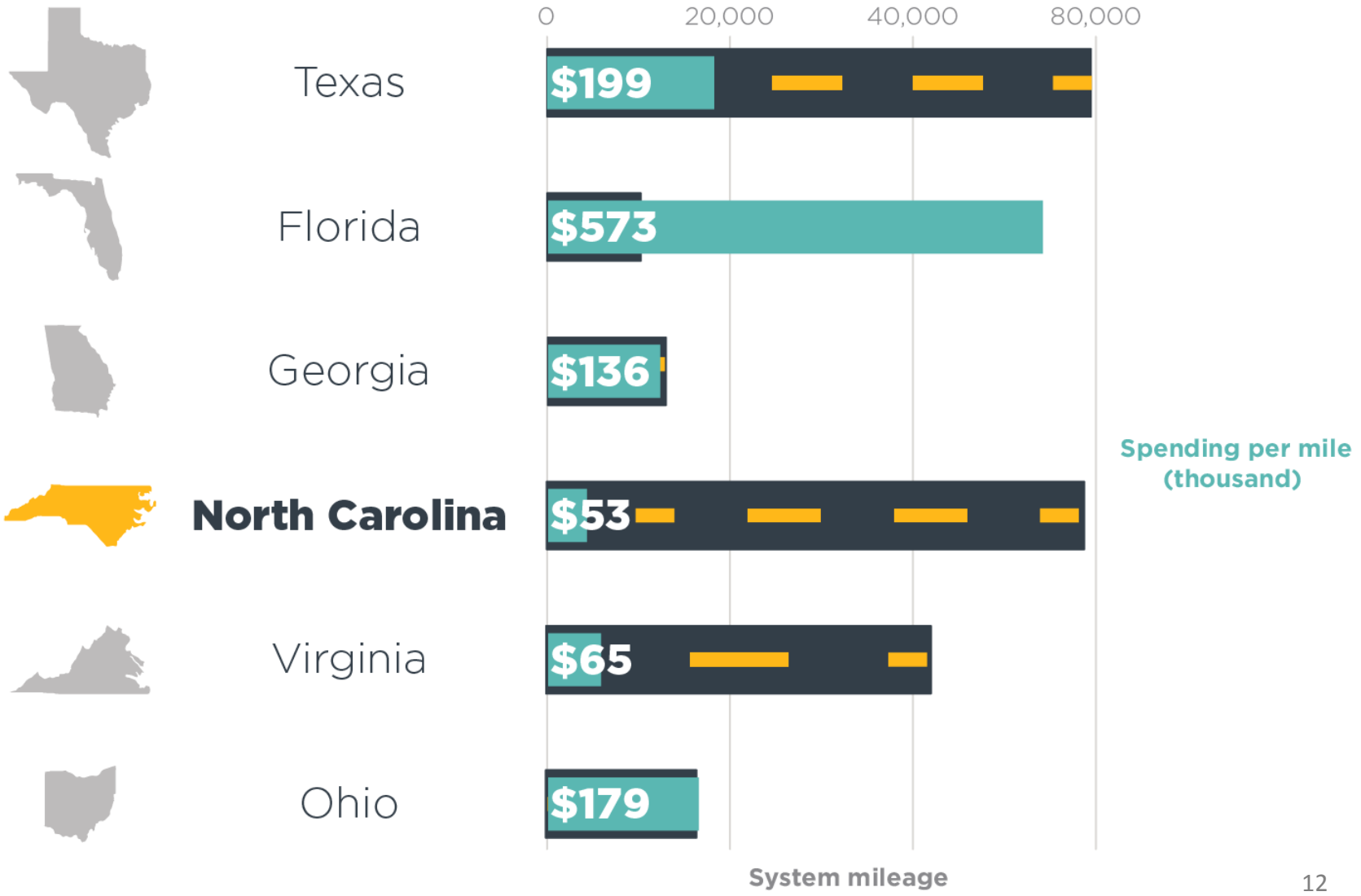
Virginia

Georgia

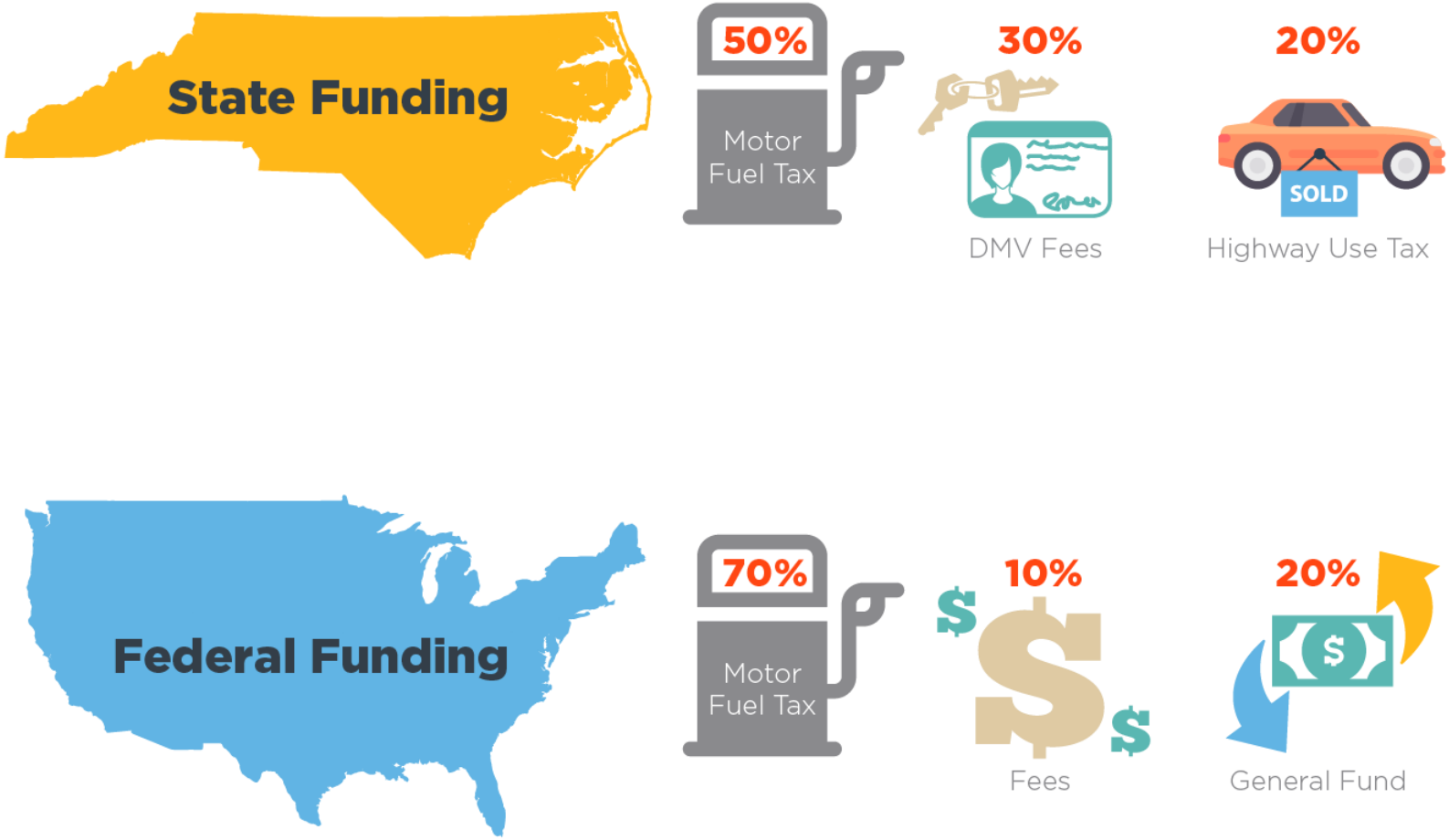


Ohio

System Mileage vs. Spending Per Mile

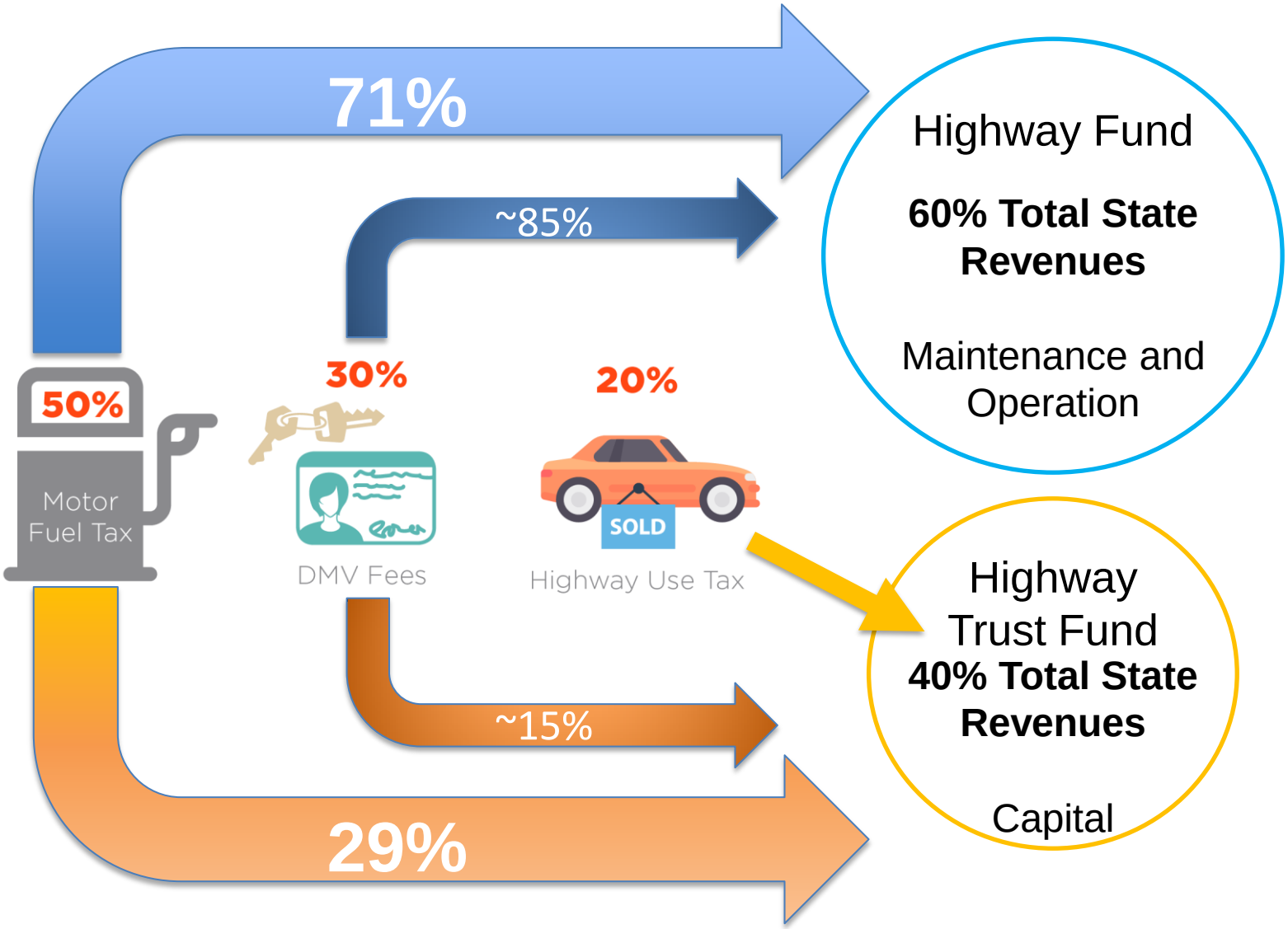


Overly Dependent on Motor Fuels Revenue for Primary Funding



Sources

Funds

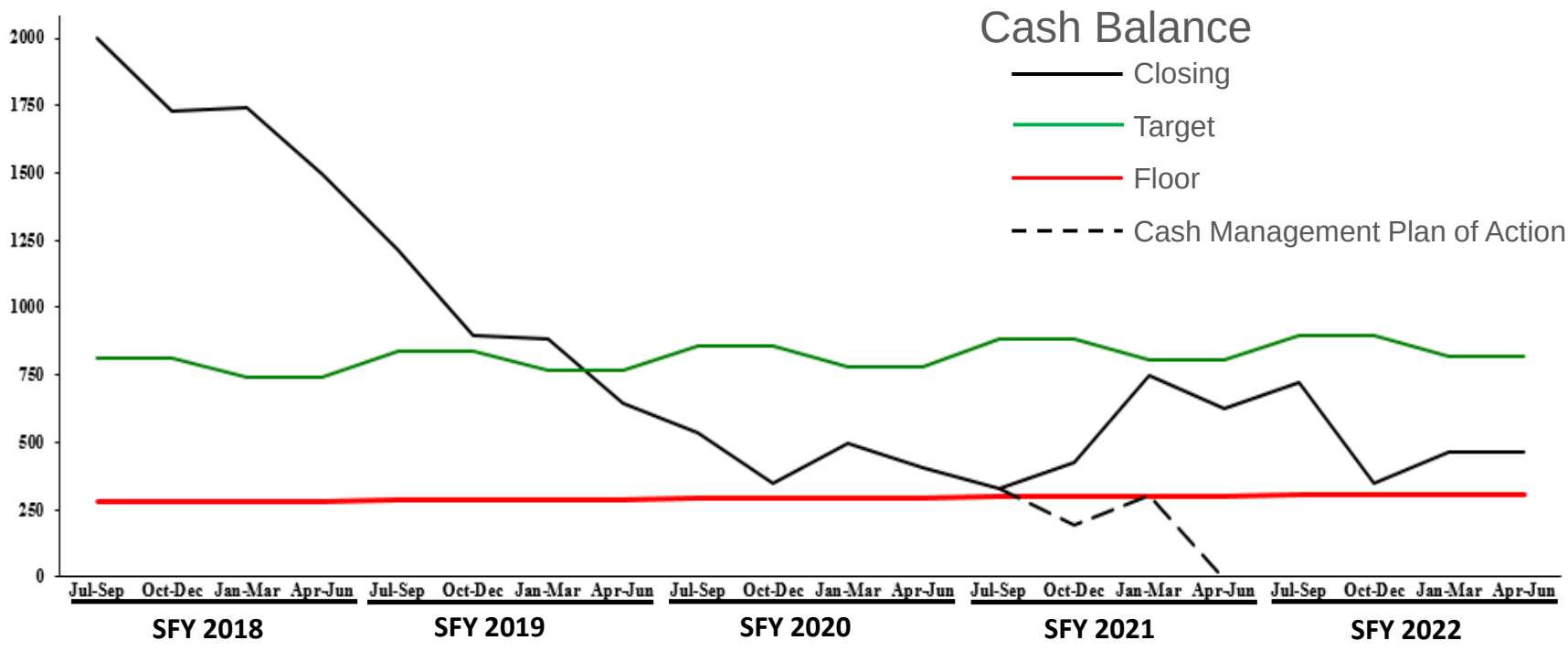


Revenue Challenges

- CAFÉ standards and impacts on motor vehicle usage
- Electric Vehicles will rapidly become the norm
- Uncertainty in Federal funding
- Changing dynamics of vehicle ownership through advancing technology

Additional Tools – Why?

Need to leverage debt affordability to accelerate projects beyond 2 years and find long term-funding solutions simultaneously



Additional Tool – How?

Innovative Financing – State Bonds

- Between $2B and $3B for additional projects
- Amount determined by debt affordability studies
- Applied at the Regional & Division tiers of the Strategic Transportation Investments Law
- Cash balance must be at or below $750 million to trigger future bond sales

Transportation is Critical to Support a Growing Economy

Site Selection Factors

1	**Highway accessibility**	**94.4**
2	Availability of skilled labor	89.8
3	Labor costs	89.6
4	Occupancy or construction costs	86.0
5	State and local incentives	84.0
6	Corporate tax rate	82.3
7	Tax exemptions	79.7
8	Energy availability and costs	78.5
9	Proximity to major markets	78.1
10	Quality of life	76.4

Combined Ratings: Corporate Survey 2016 (Area Development Magazine)

Economic Impact of Innovative Financing

Investment	Projects*	Jobs
$2 Billion	70	18,140
$3 Billion	**106**	**37,230**

51% increase in number of projects with $3 billion investment

105% increase in number of jobs with $3 billion investment

*In addition to 513 in the STIP for highways

Autonomous Vehicles

- Connected / Autonomous vehicles will change our relationship to vehicles
  - Could result in fewer automobile owners
  - Will increase safety
  - Impact to fees generated by vehicle owners is not yet known
  - Anticipate most if not all new vehicles by 2025 will be electric
- Technology will better connect various modes
  - Systems will be created that link through handheld devices
  - Transportation will be more about the outcome – reaching a destination – and less about the tools utilized (car, bus, train)
- Transportation will become a “service” instead of a mode or result of a product

Summary

- NC is growing and changing
- NC transportation needs far exceed resources and not competitive with growing peer states
- Multiple funding tools are necessary to meet immediate needs as we seek long-term solutions
- NC should invest more in transportation using current debt capacity as identified by State Treasurer while we find long-term phased in replacements for Motor Fuels and Federal Revenues

QUESTIONS?